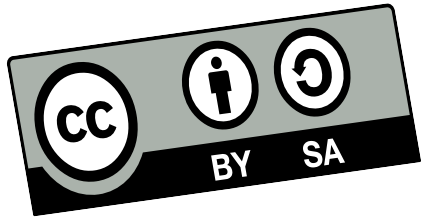


Reproducible research: a very brief overview on Intellectual Property

Fundamentals of reproducible research and free software

Miguel Colom

<http://mcolom.info>



école —————
normale —————
supérieure —————
paris — saclay —————

université
PARIS-SACLAY

Intellectual property

- Applicable to **intangible** creations of **human interest**
- **Protect the author**
- For example: a scientific discovery, a song, a painting, a logotype, a computer program, ...
- **Diverse definitions**
- For **legal aspects**, refer to the **exact regulation**



View of the article 27 of the Declaration of Human Rights

- Authors have the right of the protection of their creations
- For example: they should be able to distribute and sell their works
- Contrary to ordinary goods: intellectual property expires after a time



THE UNIVERSAL DECLARATION OF Human Rights

recognition of the inherent dignity and of the equal and inalienable rights of all members of the human family is the foundation of freedom, justice and peace in the world.

It is essential, if man is not to be compelled to have recourse, as a last resort, to rebellion against tyranny and oppression, that human rights should be protected by the rule of law.

It is essential to promote the development of friendly relations among nations.

The peoples of the United Nations have in the Charter reaffirmed their faith in fundamental human rights, in the dignity and worth of the human person and in the equal rights of men and women and have determined to promote social progress and better standards of life in larger freedom.

Member States have pledged themselves to achieve, in co-operation with the United Nations, the promotion of universal respect for and observance of human rights and fundamental freedoms.

It remains the duty of all States to promote and strengthen the great importance for the full realization of this pledge.

THE GENERAL ASSEMBLY

Recognizing that the Universal Declaration of Human Rights is a common standard of achievement for all peoples and all nations, to the end that every individual and every organ of society, keeping this Declaration constantly in mind, shall strive by teaching and education to promote respect for these rights and freedoms and by progressive measures, national and international, to secure their universal and effective recognition and observance, both among the peoples of Member States themselves and among the peoples of territories under their jurisdiction.

1. Everyone has the right to work and to just and favourable conditions of work.

2. Everyone has the right to rest and leisure, including reasonable limitation of working hours and periodic holidays with pay.

3. Everyone has the right to a just and favourable remuneration which shall include allowances and benefits, as well as overtime compensation.

4. Everyone has the right to form and to join trade unions for the protection of his interests.

5. Everyone has the right to an adequate standard of living, including food, clothing, housing, medical care and necessary social services, education and culture.

6. Everyone has the right to the highest attainable standard of physical and mental health.

7. Everyone has the right to education. Education shall be free, at least in the elementary and technical schools. Technical and vocational education shall be made generally available and higher education shall be equally accessible to all on the basis of merit.

8. Everyone has the right to recognition before the law.

9. No one shall be subjected to arbitrary arrest, detention or exile.

10. Everyone has the right to a fair and public hearing by an independent and impartial tribunal in the determination of his rights and obligations and of any criminal charge against him.

11. Everyone has the right to be presumed innocent until proven guilty according to the law.

12. No one shall be subjected to arbitrary interference with his privacy, family, home or correspondence, nor to attacks upon his honour and reputation. Everyone has the right to the protection of the law against such interference or attacks.

13. Everyone has the right to freedom of movement and residence within the borders of each country.

14. Everyone has the right to leave any country, including his own, and to return to his country.

15. Everyone has the right to acquire and to enjoy his property in peace.

16. Everyone has the right to own property alone as well as in association with others.

17. 1. Everyone has the right to own property alone as well as in association with others.

2. No one shall be arbitrarily deprived of his property.

18. Everyone has the right to freedom of thought, conscience and religion.

19. Everyone has the right to freedom of opinion and expression; this right includes freedom to hold opinions without restriction and to communicate them.

20. Everyone has the right to freedom of peaceful assembly and to associate with others in any form and to join or form trade unions.

21. Everyone has the right to take part in the government of his country, directly or through freely chosen representatives.

22. Everyone has the right to rest and leisure, including reasonable limitation of working hours and periodic holidays with pay.

23. 1. Everyone has the right to work.

2. Everyone has the right to just and favourable conditions of work and periodic paid vacations.

24. Everyone has the right to a just and favourable remuneration which shall include allowances and benefits, as well as overtime compensation.

25. Everyone has the right to a just and favourable standard of living.

26. 1. Everyone has the right to education.

2. Education shall be free, at least in the elementary and technical schools.

3. Technical and vocational education shall be made generally available and higher education shall be equally accessible to all on the basis of merit.

27. 1. Everyone has the right to own property alone as well as in association with others.

2. No one shall be arbitrarily deprived of his property.

28. 1. Everyone has the right to rest and leisure, including reasonable limitation of working hours and periodic holidays with pay.

2. Everyone has the right to a just and favourable remuneration which shall include allowances and benefits, as well as overtime compensation.

29. 1. Everyone has the right to freedom of thought, conscience and religion.

2. No one shall be subjected to arbitrary interference with his privacy, family, home or correspondence, nor to attacks upon his honour and reputation.

3. Everyone has the right to the protection of the law against such interference or attacks.

30. Nothing in this Declaration may be interpreted as implying for any State, group or person any right to engage in any activity or to carry out any action aimed at the destruction of any of the rights and freedoms here proclaimed.



Article 27 of the Declaration of Human Rights

1. *Everyone has the **right** freely to participate in the cultural life of the community, to enjoy the arts and to **share in scientific advancement and its benefits.***
2. *Everyone has the **right** to the **protection** of the moral and material interests resulting from any **scientific, literary or artistic production** of which he is the author.*

Access the text here: <https://www.un.org/en/about-us/universal-declaration-of-human-rights>

Some organizations

- **WIPO** (Worldwide International Property Organisation)
 - Specialized agencies of the **United Nations** (UN). From 1967.
 - **International registration** of marks, trademarks, patents

- **TRIPS agreement** (Trade-Related Aspects of Intellectual Property Rights)
 - **International legal agreements**
 - All the member nations of the **World Trade Organization** (WTO)
 - Copyright, patent grants



TRIPS
Trade **Related Intellectual Property Rights**

More organizations

- **European Patent Organisation (EPO)**
- European Union Intellectual Property Office (EUIPO)
- American Intellectual Property Law Association (AIPLA)
- European Patent Institute (EPI)
- Japan Intellectual Property Association (JIPA)
- ...
- Pirate Party



Some local regulations



- **France:** *Droits d'auteurs* law. Section I of the French Intellectual Property Code.
 - Music performers and producers, **copyright of 70 years**
 - **Orphan works** of unknown authors might be digitized and made available for **public use**
- **Spain:** Ley de Propiedad Intelectual (LPI). Real Decreto Legislativo 1/1996, de 12 de abril.
- **Brazil:** Instituto Nacional da Propriedade Industrial (INPE). Law: PI 9.279/96.
- (...)

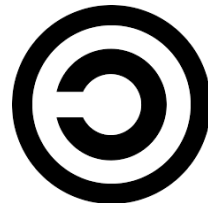


Copyright

- A type of **intellectual property**
- The authors are granted with **exclusive rights** for a **limited time**
 - Copy, distribute, exhibit, produce their creations
- When the **copyright expires**, the creation goes into the **public domain**
- Depends on the **jurisdiction**. **Different countries** have **different regulations**
 - International organizations and agreements (TRIPS, for example)

Copyright

- **Fair use exceptions**
 - Non commercial, educational or scientific, the size of the work used (be careful about plagiarism!), the context, the major societal benefit, and others.
- **Piracy: copyright violation**
- **Copyleft: a type of copyright** focused on ensuring the **freedoms** are maintained when **redistributing**. Used by the **FSF** to refer to their **strong licenses**. Other example: Creative Commons licenses.



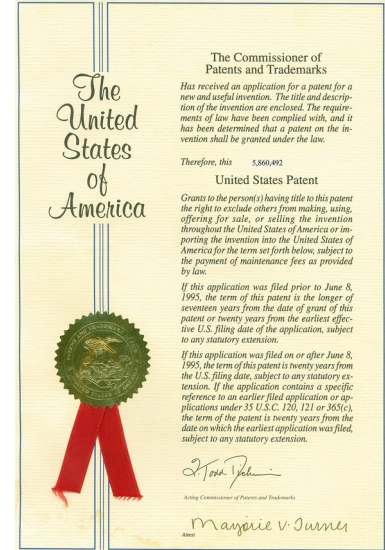
Software licenses

- A **legal-binding** text
- **Type of licenses**
 - **Permissive**: the receivers are **not required** to **maintain** the **same freedoms** as they had before distributing. For example, they might choose not to distribute the modifications in their source code. Examples: BSD
 - **Strong** licenses: the **freedoms** are **maintained** after **distribution**. Examples: GPL



Patents

- Grant **exclusive rights** to the **holder**
 - The holder issues a contract to give exploitation rights to others
 - Aim: **encourage innovation** and **investment**
 - **Prone to abuse**: patents on basic techniques can actually discourage innovation
- At this moment, **no patents for software** (EU, USA).



Patents. Use case: ViBe algorithm

- **ViBe**: A universal background subtraction algorithm for video sequences. By Olivier Barnich and Marc Van Droogenbroeck.
- **URL**: <http://www.telecom.ulg.ac.be/publi/publications/barnich/Barnich2011ViBe/index.html>

Patents. Use case: ViBe algorithm

Licence:

ViBe is **covered by a patent** (see <http://www.ulg.ac.be/telecom/research/vibe>).

Permission to use ViBe **without payment of fee** is granted for **nonprofit educational and research purposes** only.

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All the code is provided **without any guarantee**.

Patents. Use case: ViBe algorithm

- **Let's have a look** at the **patent**
- How it was **possible** to **patent** a **method**?

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